

July 2015

Cowley County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 21 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Cowley County economy.¹ These 21 sectors have a total direct output of approximately \$1524 million and support 1,952.4 jobs in Cowley County. Running the model for all 21 sectors simultaneously produces the following results:

Agriculture Contribution in Cowley County

Impact Type ²	Employment	% of Total Employment	Total Value Added ³	% of Gross Regional Product ⁴	Output ⁵	% of Gross Regional Product
Direct Effect	1,952.4	10%	\$473,958,959	31%	\$1,524,137,664	101%
Indirect Effect	979.9	5%	\$76,053,401	5%	\$143,867,110	10%
Induced Effect	534.3	3%	\$32,484,585	2%	\$55,608,724	4%
Total Effect	3,466.5	18%	\$582,496,945	39%	\$1,723,613,497	115%

As shown in the above table, agriculture, food, and food processing supports 3,466.5 jobs, or 18% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$1724 million, roughly 115% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 21 agriculture, food, and food processing sectors is approximately \$582 million, or 39% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 39% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:
https://implan.com/index.php?option=com_content&view=category&id=19

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

⁴ GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

⁵ Output = Intermediate Inputs + Value Added

In the top ten by employment, Meat processed from carcasses is the top employer in the agriculture industry with 458.0 employees. This table also shows the amount of jobs that are created by the agriculture industry in Cowley County.

Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
Meat processed from carcasses	458.0	\$217,576,320
Flavoring syrup and concentrate manufacturing.....	401.7	\$1,078,135,450
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	377.4	\$45,750,866
Grain farming	269.6	\$44,171,938
All other crop farming.....	176.2	\$10,462,102
Wholesale trade.....	140.2	\$28,407,149
Insurance agencies, brokerages, and related activities	106.0	\$15,304,637
Support activities for agriculture and forestry	100.6	\$5,908,549
Limited-service restaurants	84.9	\$4,258,564
Monetary authorities and depository credit intermediation	83.3	\$12,936,220

The Flavoring syrup and concentrate manufacturing industry directly contributes approximately \$1078 million to Cowley County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Flavoring syrup and concentrate manufacturing	401.7	\$1,078,135,450
Meat processed from carcasses	458.0	\$217,576,320
Flour milling.....	63.5	\$98,347,356
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	377.4	\$45,750,866
Grain farming	269.6	\$44,171,938
Wholesale trade.....	140.2	\$28,407,149
Rail transportation.....	40.2	\$18,953,805
Insurance agencies, brokerages, and related activities	106.0	\$15,304,637
Oilseed farming	13.5	\$13,629,073
Monetary authorities and depository credit intermediation	83.3	\$12,936,220

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Cowley County's economy.

[illegible]

All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.